CLAIMS

1. A method for forming a surface graft, comprising the process of applying energy to the surface of a substrate containing polyimide having a polymerization initiating moiety in the skeleton thereof, to generate active points on the surface of the substrate and to generate a graft polymer that is directly bonded to the surface of the substrate starting from the active points and that has a polar group.

2. A method for forming a conductive film, comprising the processes of:

applying energy to the surface of a substrate containing polyimide having a polymerization initiating moiety in the skeleton thereof, to generate active points on the surface of the substrate and to generate a graft polymer that is directly bonded to the surface of the substrate starting from the active points and that has a polar group; and

causing a conductive material to adhere to the graft polymer.

3. The method for forming a conductive film of claim 2, further comprising the process of heating after the process of causing a conductive material to adhere to the graft polymer.

4. The method for forming a conductive film of claim 2, wherein the conductive film is formed on both surfaces of a film-like or tabular polyimide substrate having the polymerization initiating moiety in the skeleton thereof.

5. A method for forming a conductive film, comprising the processes of:

applying energy to the surface of a substrate containing polyimide having a polymerization initiating moiety in the skeleton thereof, to generate active points on the surface of the substrate and to generate a graft polymer that is directly bonded to the surface of the polyimide substrate starting from the active points and that has a polar group;

applying a metal ion or a metal salt to the graft polymer; and

reducing the metal ion or a metal ion in the metal salt to deposit metal fine particles.

6. The method for forming a conductive film of claim 5, further comprising the process of heating after the process of reducing the metal ion or the metal ion in the metal salt to deposit metal fine particles.

7. The method for forming a conductive film of claim 5, wherein the conductive film is formed on both surfaces of a film-like or tabular polyimide substrate having the polymerization initiating moiety in the skeleton thereof.

8. A method for forming a conductive film, comprising the processes of:

applying energy to the surface of a substrate containing polyimide having a polymerization initiating moiety in the skeleton thereof, to generate active points on the surface of the substrate and to generate a graft polymer that is directly bonded to the surface of the substrate starting from the active points and that has a functional group interacting with an electroless plating catalyst or the precursor thereof;

applying the electroless plating catalyst or the precursor thereof to the graft polymer; and

carrying out electroless plating.

9. The method for forming a conductive film of claim 8, further comprising the process of carrying out electroplating after the process of carrying out electroless plating.

10. The method for forming a conductive film of claim 8, wherein the conductive film is formed on both surfaces of a film-like or tabular polyimide substrate having the polymerization initiating moiety in the skeleton thereof.

11. A surface graft material obtained by the method of claim 1, the material comprising:

a substrate containing polyimide having a polymerization initiating moiety in the skeleton thereof; and

a graft polymer directly bonded to the surface of the substrate.

12. A conductive material obtained by the method of claim 2, the material comprising:

a substrate containing polyimide having a polymerization initiating moiety in the skeleton thereof;

a graft polymer directly bonded to the surface of the substrate; and

a conductive material adhered to the graft polymer.

13. A conductive material obtained by the method of claim 5, the material

comprising:

a substrate containing polyimide having a polymerization initiating moiety in the skeleton thereof;

a layer comprising a graft polymer directly bonded to the surface of the substrate; and

metal fine particles deposited in the layer by reducing the metal ion or a metal ion in a metal salt.

14. A conductive material obtained by the method of claim 8, the material comprising:

a substrate containing polyimide having a polymerization initiating moiety in the skeleton thereof;

a layer comprising a graft polymer directly bonded to the surface of the substrate; and

metal fine particles deposited in the layer deposited by carrying out electroless plating.

15. A method for forming a metal pattern, comprising the process of etching the conductive film obtained by the method for forming a conductive film of claim 2.

16. A method for forming a metal pattern, comprising the process of etching the conductive film obtained by the method for forming a conductive film of claim 5.

17. A method for forming a metal pattern, comprising the process of etching the conductive film obtained by the method for forming a conductive film of claim 8.

18. A method for forming a multilayer wiring board which has, on a substrate, at least two metal layers that include the metal pattern obtained by the method for forming a metal pattern of claim 15 and an insulating layer disposed therebetween, comprising:

a drilling process of forming an opening in the insulating layer; and

a conductivity process of endowing conductivity to the opening, to connect at least two metal layers electrically.

19. A method for forming a multilayer wiring board which has, on a substrate, at least two metal layers that include the metal pattern obtained by the method for forming a

metal pattern of claim 16 and an insulating layer disposed therebetween, comprising:

a drilling process of forming an opening in the insulating layer; and

a conductivity process of endowing conductivity to the opening, to connect at least two metal layers electrically.

20. A method for forming a multilayer wiring board which has, on a substrate, at least two metal layers that include the metal pattern obtained by the method for forming a metal pattern of claim 17 and an insulating layer disposed therebetween, comprising:

a drilling process of forming an opening in the insulating layer; and

a conductivity process of endowing conductivity to the opening, to connect at least two metal layers electrically.